TITLE 326 AIR POLLUTION CONTROL BOARD

Proposed Rule
LSA Document #09-221

DIGEST

Adds 326 IAC 8-16, 326 IAC 8-17, and 326 IAC 8-22, offset lithographic printing and letterpress printing, industrial solvent cleaning, and miscellaneous industrial adhesives, respectively, concerning new volatile organic compound (VOC) reasonably available control technology (RACT) rules for Lake County and Porter County. Effective 30 days after filing with the Publisher.

HISTORY

Findings and Determination of the Commissioner Pursuant to IC 13-14-9-7 and Second Notice of Comment Period: April 29, 2009, Indiana Register (DIN: 20090429-IR-326090221FDA).

Notice of First Hearing: April 29, 2009, Indiana Register (DIN: 20090429-IR-326090221PHA).

Date of First Hearing: July 1, 2009.

SUMMARY/RESPONSE TO COMMENTS FROM THE SECOND COMMENT PERIOD

The Indiana Department of Environmental Management (IDEM) requested public comment from April 29, 2009, through May 29, 2009, on IDEM's draft rule language. IDEM received comments from the following parties:

Specialty Graphic Imaging Association (SGIA)

Improving Kids' Environment (IKE)

Printing Industry of Illinois/Indiana Association (PII)

Following is a summary of the comments received and IDEM's responses thereto:

Comment: Both the screen printing industry and the digital printing industry are impacted by the proposed rule at 326 IAC 8-17 for industrial solvent cleaning operations. The summary of North American Industry Classification System (NAICS) codes in the control technique guideline (CTG) that are expected to meet the applicability criteria in the CTG includes commercial screen printing. The CTG does not identify digital printing, 323115, as meeting the applicability requirements. U.S. EPA did not consider the impact of new and emerging industry sectors in the CTG. While digital presses do use solvents for cleaning of manufacturing equipment, U.S. EPA did not consider data and information from this industry sector in developing the RACT recommendations in the CTG. The state rules referenced in the CTG did not include digital technologies; and since 2006 we have seen the inclusion of digital technologies in both solvent cleaning and graphic arts air pollution control standards. The Bay Area Air Quality Management District in its recently adopted revisions to their graphic arts rule, Regulation 8, Rule 20, exempted digital printing operations and presses from all volatile organic compound (VOC) control requirements, including those associated with cleaning solvents. So that this proposed rule does not economically cripple a burgeoning industry sector, we recommend that digital operations by exempted from the Indiana industrial solvent cleaning operations rule. (SGIA)

Comment: The commenter concurs with the proposed limits for screen printing operations. The commenter also concurs with the provision found in Section 4(f) that allows the use of a low vapor pressure product as a compliance option. The use of low vapor pressure products does not totally address the compliance issues surrounding the use of solvent products within the digital printing industry. Unlike other print platforms, the use of chemicals and ink systems are integrally tied to the print head technology used by an individual digital device. Each machine is manufactured for use of one specific ink system and its compatible cleaning solution. Digital printing devices differ in that unlike other print platforms the chemicals used are specified for the machine. The commenter recommends that IDEM exempt this industry category from this regulation. (SGIA)

Response: After consultation with U.S. EPA, IDEM determined it was appropriate to add 326 IAC 18-17-2(b)(5) to the draft rule language to exempt digital printing presses from the applicability of the industrial solvent cleaning rule.

Comment: The notice provides little specific information about the impact that these rules would have on Indiana air quality, public health or businesses. Without discussion of the expected cost to Indiana businesses or the environmental benefit to be gained, the public's ability to comment on these rules is limited. If there are no facilities for some of these industrial categories currently operating in Lake or Porter Counties, why not adopt the rule now in case any move in? If some sources are already complying because of national emission standards for hazardous air pollutants (NESHAPS) or other requirements, why not leave them in place? (IKE)

Comment: For years, Lake and Porter Counties have been continually on the edge of meeting the ozone national ambient air quality standard (NAAQS) or in violation of it and have a very high presence of VOC emitting facilities. Why does it not make sense, to improve public health, hedge against nonattainment, and provide a cushion for future economic development, to adopt these rules and leave them in place? (IKE)

Comment: Many of the requirements appear to be work practice standards that are considered best practices

now and are required for many types of VOC and HAP emitting sources. Indiana has these requirements in numerous other rules and they are not burdensome to industry. What is the downside to leaving them in place for these source categories in Lake and Porter Counties? (IKE)

Response: The notice contains information regarding the number of sources that may potentially be impacted by this rulemaking and any available cost information that may be contained in the federal CTG for the industrial source category. The draft language that is part of the notice for public comment provides a chance for affected businesses to evaluate the applicability language to determine whether they are affected by the rule and evaluate any potential cost impact. Due to the limited number of sources affected, IDEM does not anticipate that there will be a large impact on reducing the ozone levels in the area. Many of the larger sources have already reduced their VOC emissions because of other regulations and some of the smaller sources (for example, lithographic printers) may only be subject to a subset of the VOC RACT requirements. IDEM evaluated the number of sources and reduction potential, along with modeling sensitivity analysis to demonstrate no measurable impact on ozone concentrations. These requirements were beneficial for reducing local ozone formation in the early 1990's. Now, however, the emphasis has shifted to regional reductions. Nonetheless, IDEM is required to put VOC RACT rules in place in order to achieve redesignation to attainment for Lake and Porter counties. IDEM will evaluate the need for these regulations following any future redesignation of attainment for the area and may determine that these regulations are not needed to maintain the attainment status of the area. If, based on modeling and all information available at the time of that future evaluation, IDEM determines that these rules are still required to maintain the attainment designation, they would not be repealed. IDEM is currently discussing the possibility of moving these requirements into the contingency measures developed for the maintenance plan for attainment counties. Additional work practice standards, equipment standards and the use of lower VOC coatings all inherently carry additional costs for affected sources that must be considered when determining whether these requirements are cost effective methods of achieving and maintaining attainment status. IDEM has determined that having these regulations in place will provide very limited environmental benefit because so few existing sources will be affected and any larger sources have already achieved VOC reductions through other regulations.

Comment: The commenter does not believe that this is an appropriate situation to use the abbreviated Section 7 rulemaking process, which is reserved for situations in which "the rulemaking policy alternatives available to IDEM are so limited that the notice of first public comment period would provide no substantial benefit." (IC 13-14-9-7) If IDEM were proposing a straightforward adoption of federal standards, there would be a stronger case for an abbreviated rulemaking. In this case, IDEM is proposing to adopt and then promising to repeal these rules depending on the future attainment status of Lake and Porter Counties, stating that they are legally required now but may not be later. This novel approach surely deserves public discussion through the normal rulemaking process. (IKE)

Response: IDEM is attempting to conclude this rulemaking as expeditiously as possible while still allowing for public comment due to the relatively short timeframe IDEM has to complete these rules to meet the requirements for counties currently designated as nonattainment for the 8-hour ozone standard. IDEM believes a Section 7 is appropriate in this case because rules updated to match the new federal CTGs are necessary to secure the redesignation to attainment in Lake and Porter Counties. The policy alternatives are truly limited as per the intent of the Section 7 rulemaking requirements. A written comment period and two public hearings are still required before these rules can be adopted. Therefore, IDEM believes in this circumstance the balance between expeditious completion of the rulemaking to meet the federal deadline and allowing for meaningful public input has been accomplished. The intent of the new or amended VOC RACT rules is to follow the federal CTG documents. Additionally, CTGs are subject to comment at the federal level when they are proposed.

IDEM was merely being transparent with its intent to reevaluate the need for these rules after redesignation of Lake and Porter counties as attainment so that it would not be a surprise for affected businesses or the public. Any future rulemaking to repeal these rules will go through its own separate rulemaking process, thereby allowing public comment on the suggested repeal at that time.

Comment: In the draft rule, section 326 IAC 8-16-4(f)(2) requires cleaning materials to be stored in closed containers when not in use. This section needs to be clarified to also require that solvent-laden shop towels be stored in closed containers when not in use. This recommendation is consistent with U.S. EPA's CTG for Offset Lithographic Printing and is required for printers using the 50% retention factor for solvents that meet the low vapor pressure limit of 10 mmHg at 20#C contained in 326 IAC 8-16-9(1)(C). (PII)

Response: The draft rule language has been amended as recommended.

Comment: The commenter supports the exemptions related to lithographic printing in the draft rule for industrial solvent cleaning operations at 326 IAC 8-17, including the exemptions in 326 IAC 8-17-2(a)(3), (b)(4), (c)(13), and (d)(3). However, IDEM should revise the table in 326 IAC 8-17-4(a) to specifically exclude lithographic printing from the table's coating and ink application cleaning material VOC limits. (PII)

Response: The table has not been revised to exclude lithographic printing as recommended. As noted by the commenter exemptions for lithographic printing are already located elsewhere in the rule. There are many other exemptions in the rule and it would not be appropriate to just include this one exemption in the table.

Comment: In the draft rule, 326 IAC 8-16-6(a)(2) requires owners and/or operators of heatset web offset

lithographic presses to test add-on control devices within 90 days after the press' compliance date and does not allow the use of existing emissions test data to demonstrate compliance with the heatset web press add-on control requirements contained in 326 IAC 8-16-4(a). Under this requirement, a press owner that is scheduled to conduct compliance testing on an existing press as part of an existing operating permit even one day before the effective date of the proposed rule would be required to conduct a second compliance test within 90 days after the April 1, 2011 compliance date. Stack testing to demonstrate compliance with applicable permit conditions can cost between $10,000 and $15,000 and it is economically unfeasible to conduct duplicate stack tests when such tests are unnecessary. This requirement poses an undue administrative and economic burden and needs to be revised to allow test results from the most recent stack testing performed as part of an acceptable testing protocol. (PII)

Response: IDEM concurs and the draft rule language at 326 IAC 8-16-6(a)(2) has been amended to allow testing to take place prior to the compliance date as long as it is done in accordance with an IDEM approved testing protocol and under current operating conditions.

Comment: In the draft rule, 326 IAC 8-16-6(a)(4) incorporates references to the test methods and procedures that must be employed during add-on control device compliance testing. U. S. EPA test methods 25 and 25A specify minimum sampling component temperatures that are below the exhaust gas stream temperatures for heatset web offset lithographic presses and will result in the condensation of ink oil in the sampling probe. To prevent this condition the rule should indicate that the sampling equipment should be heated to at least the gas stream temperature prior to sampling. (PII)

Response: The draft rule language has been amended as recommended.

Comment: In the draft rule, 326 IAC 8-16-7(a) incorporates references for add-on control device monitoring and recordkeeping requirements, including 326 IAC 8-1-12(b)(2) and (c)(6)-(8). As indicated in 326 IAC 8-1-12, these monitoring and recordkeeping requirements originally only applied to flexographic and rotogravure publication and packaging operations, and not to lithographic printing operations. Therefore, the monitoring requirements in 326 IAC 8-1-12 need to be revised to reflect the unique nature of the lithographic printing industry. (PII)

Response: The draft rule language has been amended as recommended.

Comment: The rule needs to clarify that "continuous" temperature monitoring and recording means that a recording must occur at least once every 15 minutes. This is consistent with U.S. EPA's Technical Support Document for Title V Permitting of Printing facilities, which states on page 53:

"TEMPERATURE MONITORING DEVICES

Temperature can be measured using devices such as thermocouples, resistance temperature detectors (RTDs), and infrared (IR) thermometers. Requirements for temperature monitoring devices include the following:

(1) Collect at least 4 evenly spaced temperature readings per hour of process operation in order to have a valid hour of data." (PII)

Response: The draft rule language has been amended as recommended.

Comment: The rule needs to be revised to eliminate the need to continuously record temperature in the gas stream both immediately before and after the catalyst bed in a catalytic incinerator and to monitor the periods of time when the temperature difference across the bed is less than 80% of the temperature difference measured during the most recent compliance test. These requirements are unnecessary as the measured temperature difference across the catalyst bed is not indicative of normal operation. While this may be a common monitoring requirement for other industries, it is one that is impossible for all printing operations, including lithographic, to meet on a consistent basis. The primary reason is due to the large variations in coverage experienced on a per job and per day basis. The coverage will dictate the amount of ink that will be required to be used to produce a job. Since ink VOC accounts for more than 90% of stack VOC emissions, the temperature rise across the catalytic bed will continuously fluctuate; these fluctuations can be very dramatic. The printing industry has had extensive discussions with U.S. EPA on this issue and U.S. EPA has accepted the fact that this is an impossible condition to meet on a continuous basis. This is the reason why this requirement does not appear in any U.S. EPA reference document or rules. The rule should only require the temperature in a catalytic oxidizer system to be monitored upstream of the catalyst bed. Page D-18 of U.S. EPA's Technical Support Document for Title V Permitting of Printing Facilities contains additional information on this issue. (PII)

Response: The draft rule language has been amended as recommended.

Comment: The requirement in the draft rule, 326 IAC 8-1-12(c)(7), for lithographic press owners and operators to maintain a log of the operating time for the capture system, control device, monitoring equipment, and associated coating facility needs to be deleted. The draft rule already requires press owners to install and operate continuous temperature monitoring and recording equipment. Since the press and the control device are interlocked and the press can not run unless the control device is operating, the temperature recording equipment will serve as a record of the operating time for the press, control device, and monitoring equipment. In many cases this recording output may be a digital file or a strip chart recording. To require this data to be placed into a log each day that the press is operating poses a burden that duplicates the intent and purpose of the recording equipment. Additionally, it is not possible to identify the individual press being controlled in a situation where two

or more oxidizers are working in tandem to control the emissions from multiple presses. This section needs to be deleted or revised to allow the use of temperature recorder data as evidence of the press, control device, and monitoring equipment operating time. (PII)

Response: The draft rule language has been amended as recommended.

Comment: In the draft rule, 326 IAC 8-16-7(c) contains the fountain solution records that subject lithographic printers must maintain. This section needs to be clarified to permit the use of a "recipe" recordkeeping approach that describes the "recipe" used to mix a fountain solution used on-press. Since as-applied fountain solution is almost always prepared in the same manner, this approach best minimizes the recordkeeping burden associated with the draft rule's "per batch" requirements while maintaining assurance that the requirements in the rule are being met. (PII)

Response: The draft rule language has been revised as recommended.

Comment: In the draft rule, 326 IAC 8-16-7(d) requires owners or operators of subject non-heatset web offset lithographic printing presses to document all periods of time alcohol is used in the press's fountain solution. 326 IAC 8-16-4(d), however, does not permit the use of alcohol on a non-heatset press. Including a provision that requires printers to report such use will only confuse printers and make them think they can use alcohol on a non-heatset press when in fact the rule does not allow them to do so. This requirements needs to be deleted. (PII)

Response: The draft rule language has been revised as recommended.

Comment: In the draft rule, 326 IAC 8-16-10(a) requires owners or operators of subject lithographic and letterpress printing presses to submit to IDEM compliance certifications within 30 days after complying with the rule's requirements. As written, this section appears to require separate certifications for sources that phase-in their compliance strategies, such as meeting the draft rule's fountain solution requirements in August 2009 and cleaning solvent requirements in September 2009. 326 IAC 8-16-10(b)(7), however, requires owner or operators to submit as part of the compliance certification a statement that they are complying with the requirements of the rule that apply to them. 326 IAC 8-16-10 needs to be clarified so that it is only requiring one compliance certification. (PII)

Response: The draft rule language has been revised as recommended.

Comment: In the draft rule, 326 IAC 8-16-11(a) requires exempt facilities to maintain monthly records of material use, VOC content, and VOC emissions to demonstrate they are exempt from the rule. This approach would require these facilities to obtain purchasing summaries from their suppliers and estimate their VOC emissions every month to ensure VOC emissions remain below the three ton per 12-month rolling period applicability threshold. This requirement creates a very burdensome compliance demonstration hurdle and places an unnecessary administrative burden on these exempt facilities. The commenter recommends that IDEM provide several options for small printing facilities to determine their exempt status. The first option would be the use of annual purchasing or annual actual material use records that would be equivalent to the three ton per 12-month rolling period applicability threshold. This option is currently used by the Ohio Environmental Protection Agency small and medium sized printing facility permit-by-rule program and the Illinois Department of Environmental Protection's draft RACT rule for lithographic printing. The second option would be the use of production based records such as the number of impressions or ink estimate data that can be proportionately adjusted to material use records, for example, pounds of ink per impression, and used to estimate material consumption. This option is necessary given the high probability that not all printing sources will be able to obtain monthly or annual purchasing records from material suppliers in a timely fashion. Both the first and second options provide a screening method for small printing facilities. Thus, the third option would be for printers to estimate their actual VOC emissions based on material use records. This option is necessary for those printers that slightly exceed the material use threshold but have actual VOC emissions less than three tons per 12-month rolling period. (PII)

Response: The draft rule language has been revised as recommended.

Comment: The commenter supports IDEM's efforts to survey printers in Lake and Porter counties and assess the potential economic impact of the draft rule. IDEM should not rely upon the cost analysis contained in U.S. EPA's 2006 CTG for Offset Lithographic Printing. Due to an imposed court ordered deadline, U. S. EPA did not conduct a new economic analysis and relied upon its original economic impact analysis included in the 1993 draft CTG for Offset Lithography. Due to costs and technical difficulties associated with reducing or eliminating alcohol, small printers face a more difficult transition to meet the recommended VOC levels for fountain solutions. (PII)

Response: IDEM is very interested in obtaining more information about the cost associated with the rulemaking also. IDEM realizes that the cost information in the CTG may be outdated, but at this time, this is the only information that IDEM has. IDEM and the Printing Industries of Illinois/Indiana Association (PII) received very little response to the survey sent out to affected sources earlier this year.

Comment: There are a number of minor revisions to the draft rule that require IDEM's attention. These revisions are minor in nature and are reflected in the enclosed redline version of the draft rule. (PII)

Response: The draft rule language has been amended as recommended.

SUMMARY/RESPONSE TO COMMENTS RECEIVED AT THE FIRST PUBLIC HEARING

On July 1, 2009, the Air Pollution Control Board (board) conducted the first public hearing/board meeting

concerning the development of new rules 326 IAC 8-16, 326 IAC 8-17, and 326 IAC 8-22. No comments were made at the first hearing.

326 IAC 8-16; 326 IAC 8-17; 326 IAC 8-22

SECTION 1. 326 IAC 8-16 IS ADDED TO READ AS FOLLOWS:

Rule 16. Offset Lithographic Printing and Letterpress Printing

326 IAC 8-16-1 Applicability

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 1. (a) This rule applies to sources in Lake County or Porter County that meet either of the following criteria:

(1) Have actual volatile organic compound (VOC) emissions, before consideration of controls, of equal to or greater than three (3) tons per rolling twelve (12) month period from all offset lithographic printing operations, including fountain solution and cleaning activities. Offset lithographic printing presses include heatset web, nonheatset web, and sheet-fed.

(2) Have actual VOC emissions, before consideration of controls, equal to or greater than three (3) tons per rolling twelve (12) month period from all letterpress printing operations, including cleaning activities.

(b) Offset lithographic printing operations and letterpress printing operations exempt from the requirements of this rule based on the threshold applicability in subsection (a) shall maintain records as required under section 11 of this rule.

(Air Pollution Control Board; 326 IAC 8-16-1)

326 IAC 8-16-2 Exemptions

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 2. The following exemptions apply in this rule:

(1) Any heatset web offset lithographic printing press or heatset web letterpress printing press with potential VOC emissions from the dryer (ink oil) less than twenty-five (25) tons per year before consideration of controls or any heatset web offset lithographic printing press or heatset web letterpress printing press with actual VOC emissions from the dryer (ink oil) limited through enforceable permit conditions to less than twenty-five (25) tons per year before consideration of controls is exempt from the add-on control requirements in section 4(a) of this rule.

(2) Any heatset web offset lithographic printing press used for book printing or with maximum web width of twenty-two (22) inches or less is exempt from the add-on control requirements in section 4(a) of this rule.

(3) Any offset lithographic printing press with a total fountain solution reservoir capacity of less than one (1) gallon is exempt from the fountain solution requirements in section 4(b), 4(c), and 4(d) of this rule.

(4) Any sheet-fed off-set lithographic printing press with a maximum sheet size of eleven (11) inches by seventeen (17) inches or smaller is exempt from the fountain solution control requirements in section 4(c) of this rule.

(Air Pollution Control Board; 326 IAC 8-16-2)

326 IAC 8-16-3 Definitions

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 3. The following definitions apply throughout this rule:
(1) "Alcohol" means any of the following compounds, when used as a fountain solution additive for offset lithographic printing:
(A) Ethanol.
(B) n-Propanol.
(C) Isopropanol.
(2) "Alcohol substitute" means a nonalcohol additive that contains VOC and is used in the fountain solution. Some additives are used to reduce the surface tension of water, and others are added to prevent piling (ink buildup).
(3) "Automatic blanket wash system" means equipment used to clean lithographic blankets, which can include, but is not limited to, those utilizing a cloth and expandable bladder, brush, spray, or impregnated cloth system.
(4) "Batch" means a supply of fountain solution that is prepared and used without alteration until completely used or removed from the printing process. For purposes of this rule, the term may apply to solutions prepared in either discrete batches or solutions that are continuously blended with automatic mixing units.
(5) "Cleaning material" means a liquid solvent or solution used to clean the operating surfaces of a printing press and its parts. For purposes of this rule, the term includes, but is not limited to:
(A) blanket wash;
(B) roller wash;
(C) plate cleaner;
(D) metering roller cleaner;
(E) impression cylinder washes;
(F) rubber rejuvenators; and
(G) other cleaners;
used for cleaning a press, press parts, or to remove dried ink or coating from the areas around the press. For purposes of this rule, the term does not include cleaners used on electronic components of a press, prepress cleaning operations (for example, platemaking), postpress cleaning operations (for example, binding), cleaning supplies (for example, detergents) used to clean the floor (other than dried ink) in the area around a press, or cleaning performed in parts washers or cold cleaners.
(6) "Composite partial vapor pressure" means the sum of the partial pressures of the VOC compounds in a solvent.
(7) "Fountain solution" means a mixture of water and other volatile and nonvolatile chemicals and additives used in the lithographic printing operations that maintains the quality of the printing plate including preventing debris buildup (for example, spray power, paper fiber, coating particles, dried ink particles, and other materials), and increases viscosity and reduces the surface tension of the water so that it spreads easily across the printing plate surface. The fountain solution wets the nonimage area so that the ink is maintained within the image areas. Nonvolatile additives include mineral salts and hydrophilic gums. Alcohol and alcohol substitutes are the most common VOC additives used to reduce the surface tension of the fountain solution.
(8) "Fountain solution reservoir" means the collection tank that accepts fountain solution recirculated from the printing unit. In some cases, the tanks are equipped with cooling coils for refrigeration of the fountain solution.
(9) "Heatset" means a class of lithography that requires a heated dryer to solidify the printing inks.
(10) "Letterpress printing" means a printing process in which the:
(A) image area is raised relative to the nonimage area; and
(B) paste ink is transferred to the substrate directly from the image surface.
(11) "Lithographic printing" means a printing process where the image and nonimage areas are chemically differentiated. The image area is oil receptive, and the nonimage area is water receptive. This method differs from other printing methods where the image is a raised or recessed surface.
(12) "Nonheatset" means a class of printing that does not require a heated dryer to solidify the printing inks. Ultraviolet-cured and electron beam-cured inks are considered nonheatset.
(13) "Offset printing" means a printing process that transfers the ink film from the plate to an intermediary surface (blanket) that, in turn, transfers the ink film to the substrate.
(14) "Sheet-fed printing" means a printing process where individual sheets of substrate are fed into the press sequentially.
(15) "Web" means a lithographic printing process where a continuous roll of substrate is fed into a press.

(Air Pollution Control Board; 326 IAC 8-16-3)

326 IAC 8-16-4 Control requirements

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 4. (a) The owner or operator of a heatset web offset lithographic printing press or a heatset web letterpress, unless exempt as specified in section 2(1) or 2(2) of this rule, shall operate a control system that meets one (1) of the following requirements:

(1) Reduces VOC emissions from each dryer by at least ninety percent (90%) for a control system first installed before January 1, 2010.

(2) Reduces VOC emissions from each dryer by at least ninety-five percent (95%) for a control system first installed on or after January 1, 2010.

(3) Maintains a maximum VOC outlet concentration of twenty (20) parts per million by volume (ppmv), as hexane (C_6H_{14}) on a dry basis.

(b) The owner or operator of a heatset web offset lithographic printing press shall meet one (1) of the following requirements for the fountain solution used on that press:

(1) Maintain the as-applied VOC content of the fountain solution at or below five percent (5%), by weight, and use no alcohol in the fountain solution.

(2) If the fountain solution contains alcohol, maintain the as-applied VOC content of the fountain solution at or below one and six-tenths percent (1.6%), by weight.

(3) If the fountain solution contains alcohol, maintain the as-applied VOC content of the fountain solution at or below three percent (3%), by weight, and refrigerate the fountain solution to below sixty (60) degrees Fahrenheit.

(c) The owner or operator of a sheet-fed offset lithographic printing press shall meet one (1) of the following requirements for the fountain solution used on that press:

(1) Maintain the as-applied VOC content of the fountain solution at or below five percent (5%), by weight, and use no alcohol in the fountain solution.

(2) If the fountain solution contains alcohol, maintain the as-applied VOC content of the fountain solution at or below five percent (5%), by weight.

(3) If the fountain solution contains alcohol, maintain the as-applied VOC content of the fountain solution at or below eight and one-half percent (8.5%), by weight, and refrigerate the fountain solution to below sixty (60) degrees Fahrenheit.

(d) The owner or operator of a nonheatset web offset lithographic printing press shall maintain the as-applied VOC content of the fountain solution at or below five percent (5%), by weight, and use no alcohol in the fountain solution.

(e) Where it can be demonstrated that an offset lithographic printing press cannot be operated with fountain solutions meeting the requirements of this rule, the owner or operator may submit a petition to the commissioner requesting a site-specific reasonably available control technology (RACT) plan as specified in 326 IAC 8-1-5.

(f) The owner or operator of an offset lithographic printing press or letterpress printing press shall meet the following requirements for cleaning materials:

(1) Use not more than one hundred ten (110) gallons per rolling twelve (12) month period of cleaning materials that exceed both of the following requirements:

(A) An as-applied VOC content less than seventy percent (70%), by weight.

(B) An as-applied VOC composite partial vapor pressure less than ten (10) mmHg at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).

(2) When not in use, all cleaning materials and solvent-laden shop towels shall be kept in closed containers.

(Air Pollution Control Board; 326 IAC 8-16-4)

326 IAC 8-16-5 Compliance dates

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 5. The owner or operator of an offset lithographic or letter press printing press that is subject to this rule shall comply with the requirements of this rule no later than April 1, 2011, or upon initial startup of the press for new presses.

(Air Pollution Control Board; 326 IAC 8-16-5)

326 IAC 8-16-6 Compliance test methods

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 6. (a) Compliance with the add-on control requirements shall be determined by performing emission tests as follows:

(1) Run at typical operating conditions and flow rates compatible with scheduled production during any emission testing.

(2) The initial emission test shall be performed, within ninety (90) days after the compliance date or within one hundred eighty (180) days after initial startup for new presses. An emission test conducted prior to April 1, 2011, in accordance with an IDEM approved testing protocol, and operation of the press during the test was consistent with the press's current operating conditions and capacity is acceptable.

(3) The negative dryer pressure shall be established during the initial test using an airflow direction indicator, such as a smoke stick or aluminum ribbons, or differential gauge. Continuous dryer air flow monitoring is not required.

(4) The test methods and procedures in 326 IAC 8-1-4(d) through 326 IAC 8-1-4(f) shall be followed. If the limit of twenty (20) ppmv is being met, only the VOC concentration of the exit exhaust shall be determined. The following test requirements apply:

(A) To prevent condensation when using 40 CFR 60, Method 25*, the probe should be heated to at least the gas stream temperature, typically close to three hundred fifty (350) degrees Fahrenheit.

(B) To prevent condensation when using 40 CFR 60, Method 25A* when testing heatset web offset presses, the sampling components and flame ionization detector block should be heated to at least the gas stream temperature, typically close to three hundred fifty (350) degrees Fahrenheit.

(b) VOC (alcohol) content of as-applied fountain solution shall be determined by using an accurate hydrometer to measure the alcohol content of the fountain solution. The hydrometer shall have a visual, analog, or digital readout with an accuracy of five-tenths percent (0.5%).

(c) VOC content of as-applied fountain solution or cleaning materials shall be determined in accordance with the following:

(1) Analysis by 40 CFR 60, Method 24*.

(2) Analytical data derived from a material safety data sheet (MSDS) or equivalent information from the supplier as long as it is based on 40 CFR 60, Method 24*.

(3) If diluted prior to use, a material balance calculation that combines 40 CFR 60, Method 24* analytical data or supplier information for the concentrated materials used to prepare the fountain solution or cleaning material and the proportions in which they are mixed to make the as-applied material.

(d) Temperature requirements for refrigeration shall be determined with a thermometer or other temperature detection device capable of reading to five-tenths (0.5) degree Fahrenheit.

(e) The composite partial vapor pressure of a cleaning material shall be determined according to the following:

(1) Determine the identity and quantity of each compound in a blended organic solvent using the manufacturer's product formulation data.

(2) Determine the vapor pressure of each pure VOC component by using one (1) of the following:

(A) Standard reference texts.

(B) ASTM Method D2879-92*.

(3) Calculate the composite partial vapor pressure of the cleaning material by using the following formula:

$$PP_c = \sum_{i=1}^{n} \frac{(W_i)(VP_i) / MW_i}{\frac{W_w}{MW_w} + \frac{W_c}{MW_c} + \sum_{i=1}^{n} \frac{W_i}{MW_i}}$$

Where:

W_i	=	**Weight of the "i"th VOC compound, in grams**
W_w	=	**Weight of water, in grams**
W_c	=	**Weight of exempt compound, in grams**
MW_i	=	**Molecular weight of the "i"th VOC compound, in g/g-mole**
MW_w	=	**Molecular weight of water, in g/g-mole**
MW_c	=	**Molecular weight of exempt compound, in g/g-mole**
PP_c	=	**VOC composite partial vapor pressure at 20°C (68°F), in mmHg**
VP_i	=	**Vapor pressure of the "i"th VOC compound at 20°C (68°F), in mmHg**

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(Air Pollution Control Board; 326 IAC 8-16-6)

326 IAC 8-16-7 Monitoring and record keeping

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 7. (a) The owner or operator of a press that is subject to the add-on control requirements of section 4(a) of this rule shall comply with the following:

(1) Install, calibrate, maintain, and operate temperature monitoring and recording equipment as follows:

(A) For catalytic oxidizer control systems, the temperature monitoring and recording equipment shall monitor the gas temperature upstream of the catalyst bed at least once every fifteen (15) minutes by an analog or digital recording device. The catalyst bed material shall be inspected annually for general catalyst condition and any signs of potential catalyst depletion. The source shall also collect a representative sample of the catalyst from the oxidizer, per manufacturer's recommendations, and have it tested to evaluate the catalyst's capability to continue to function at or above the required control efficiency. An evaluation of the catalyst bed material shall also be conducted whenever the results of the inspection indicate signs of potential catalyst depletion or poor catalyst condition based on manufacturer's recommendations, but not less than once per year.

(B) For thermal and regenerative oxidizer control systems, the temperature monitoring and recording equipment shall monitor and record the oxidizer operating temperature at least once every fifteen (15) minutes.

(C) The temperature to be monitored by clauses (A) and (B) shall be established during testing required to demonstrate compliance with the emission standard. The temperature shall be computed as the time-weighted average of the temperature values recorded during the test. The source must maintain the oxidizer at a three (3) hour average temperature not less than fifty (50) degrees Fahrenheit below the average temperature observed during the most recent stack test to demonstrate continuous compliance. Temperature monitoring is required only when a connected printing press is operational.

(2) Collect and record or maintain at the subject source for a period of five (5) years the following information:

(A) The results of any required stack test to demonstrate compliance with the requirements of section 6(a)(4) of this rule.

(B) The operating parameters for any required control device as specified in section 7(a)(1) of this rule.

(b) The owner or operator of a heatset web or sheet-fed offset lithographic printing press using alcohol shall measure the following:

(1) The VOC (alcohol) content, in accordance with section 6(b) of this rule, of any altered fountain solution, at the time of alteration, in percent by weight, of the fountain solution employed in the press using an hydrometer, as follows:

(A) A standard solution shall be used to calibrate the hydrometer for the type of alcohol used in the fountain solution, in accordance with manufacturer's specifications, against measurements performed to determine compliance.

(B) The hydrometer must be corrected for temperature at least once per eight (8) hour shift or once per batch of fountain solution prepared or modified, whichever is longer.

For fountain solutions to which VOC containing material is added at the source with automatic feed equipment, VOC content shall be determined for the as-applied fountain solution based on the setting of the automatic feed equipment that makes additions of VOC containing material up to a pre-set level. The equipment used to make automatic additions must be installed, calibrated, operated, and maintained in accordance with manufacturer's specifications.

(2) The temperature, in degrees Fahrenheit, of the fountain solution, on a daily basis, as measured at the recirculating tank, if the owner or operator refrigerates the fountain solution to comply with the VOC content limit.

(c) The owner or operator of an offset lithographic printing press shall maintain records for each batch of fountain solution prepared for use in the press as follows:

(1) A recipe log that identifies all mix ratio recipes used to prepare the as-applied fountain solution. Each recipe shall be maintained in the mix ratio recipe log for a period of five (5) years from the date the mix ratio recipe was last prepared. Each mix ratio recipe shall clearly identify the following:

(A) The VOC content of each concentrated alcohol substitute added to make the batch of fountain solution, based upon the manufacturer's laboratory analysis using 40 CFR 60, Method 24*.

(B) The proportions in which the fountain solution is mixed, including the addition of alcohol or water, or both. The proportion may be identified as:

(i) a volume when preparing a discrete batch; or

(ii) the settings when an automatic mixing unit is employed.

(C) The calculated VOC content of the final mixed recipe.

(2) For fountain solutions containing alcohol substitutes purchased with less than five percent (5%) VOC content before dilution, the owner or operator may maintain a current MSDS with VOC content determined by 40 CFR 60, Method 24* and does not need to keep records of VOC dilution and addition.

(d) The owner or operator of an offset lithographic printing press or letterpress printing press shall maintain monthly records of the following information:

(1) The total amount, in gallons, of each cleaning material used.

(2) The VOC content or VOC composite vapor pressure of all cleaning material used.

(3) The total amount, in gallons, of each cleaning material used that exceed the allowable VOC content or VOC composite partial vapor pressure.

(4) The total amount, in gallons, of all inks used.

(e) An owner or operator a heatset web offset lithographic printing or heatset web letterpress printing press that is exempt from the add-on control requirements in section 4(a) of this rule shall maintain monthly records of the following information:

(1) The total pounds of each ink used.

(2) The VOC content of each ink.

(3) The hours of operation of each press.

(f) All records required by this rule shall be maintained at the source for a period of five (5) years.

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(Air Pollution Control Board; 326 IAC 8-16-7)

326 IAC 8-16-8 Reporting requirements for monitoring and record keeping information

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 8. The owner or operator shall notify the department of any exceedances of requirements in section 4 of this rule within forty-five (45) days after the instance occurs.

(Air Pollution Control Board; 326 IAC 8-16-8)

326 IAC 8-16-9 Retention factors and capture efficiencies

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 9. For the purpose of determining VOC emissions from offset lithographic printing presses, the following retention factors and capture efficiencies shall be used:

(1) A portion of the VOC contained in inks and cleaning materials is retained in the printed web or in the shop towels used for cleaning. The following retention factors shall be used:

(A) A twenty percent (20%) VOC retention factor shall be used for heatset inks printed on absorptive substrates, meaning eighty percent (80%) of the VOC in the ink is emitted during the printing process and is available for capture and control by an add-on pollution control device.

(B) A ninety-five percent (95%) VOC retention factor shall be used for sheet-fed and nonheatset web inks printed on absorptive substrates, meaning five percent (5%) of the VOC in the ink is emitted during the printing process.

(C) A fifty percent (50%) VOC retention factor shall be used for cleaning material VOC in shop towels for cleaning materials with a VOC composite partial vapor pressure of not more than ten (10) mmHg at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit) if the contaminated shop towels are kept in closed containers, meaning fifty percent (50%) of the VOC used on the shop towels is emitted during the cleaning process.

(2) A portion of the VOC contained in inks, fountain solutions, and automatic blanket washes on the heatset presses is captured in the press dryer for control by add-on pollution control devices. The following capture efficiencies are to be used:

(A) A one hundred percent (100%) VOC carry over efficiency shall be used for inks. All the VOC in the ink that is not retained is assumed to be volatilized in the press dryer. Capture efficiency testing for heatset dryers is not required if it is demonstrated that pressure in the dryer is negative relative to the surrounding press room and the airflow is into the dryer.

(B) A seventy percent (70%) VOC carry over efficiency shall be used for fountain solutions containing alcohol substitutes.

(C) A forty percent (40%) VOC carry over efficiency shall be used for automatic blanket wash solutions with a VOC composite partial vapor pressure of not more than ten (10) mmHg at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).

(Air Pollution Control Board; 326 IAC 8-16-9)

326 IAC 8-16-10 Requirements on compliance certification

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 10. The owner or operator of an offset lithographic printing or letterpress printing operation shall submit to the department a compliance certification not later than thirty (30) days after the compliance date. The compliance certification shall contain the following, where applicable:

(1) A description of the control requirements to which the operation is subject.

(2) A description of the add-on control system or systems at the source.

(3) A description of the monitoring devices at the source.

(4) A description of compliance records required by section 7 of this rule.

(5) The results of any compliance tests, including documentation of test data.

(6) A statement by the owner or operator of the lithographic printing or letterpress printing operation as to whether the offset lithographic printing or letterpress printing press has complied with the requirement or requirements to which it is subject.

(Air Pollution Control Board; 326 IAC 8-16-10)

326 IAC 8-16-11 Record keeping requirements for exempt sources

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 11. (a) An owner or operator of an offset lithographic printing or letterpress printing source that is exempt from the requirements of this rule based on the threshold applicability in section 1(a) of this rule shall maintain records using one (1) of the following methods:

(1) Material use records that show the source meets the following material use thresholds:

Type of Offset Lithographic Printing Operation	Annual (Twelve (12) Month Rolling) Threshold for RACT Applicability	Monthly (Twelve (12) Month Rolling) Threshold for RACT Applicability
Sheet-fed or nonheatset web	855 gallons of cleaning solvent and fountain solution additives	71.25 gallons of cleaning solvent and fountain solution additives
Heatset web	6,000 pounds of ink, cleaning solvent, and fountain solution additives	500 pounds of ink, cleaning solvent, and fountain solution additives

(2) Production based records, such as the number of impressions or ink estimate data that has been proportionally adjusted to key material use data, for example, pounds of ink per impression, that can be used to estimate and compare a source's material use against the material use thresholds in subdivision (1).

(3) Monthly emissions estimate records using the appropriate factors in section 9 of this rule that demonstrate the source's VOC emissions from all lithographic and letterpress printing operations, including emissions from cleaning solutions used on lithographic and letterpress printing operations and fountain solutions are less than three (3) tons per rolling twelve (12) month period.

(b) An owner or operator of an offset lithographic printing or letterpress printing source that is exempt from the requirements of this rule based on the applicability criteria in section 2(1) of this rule shall maintain the following records on a monthly basis:

(1) The total pounds of each ink used.

(2) The VOC content of each ink.

(3) The hours of operation of each press.

(c) Records required by subsection (a) shall be submitted to the department within thirty (30) days of the receipt of a written request. If the records are not available, the source shall be considered to be subject to the requirements in section 4 of this rule.

(Air Pollution Control Board; 326 IAC 8-16-11)

SECTION 2. 326 IAC 8-17 IS ADDED TO READ AS FOLLOWS:

Rule 17. Industrial Solvent Cleaning Operations

326 IAC 8-17-1 Applicability

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 1. (a) This rule applies to sources that meet the following criteria:
(1) Are located in Lake County or Porter County.
(2) Employ solvent materials in solvent cleaning operations during the production, repair, maintenance, or servicing of any of the following:
(A) Parts.
(B) Products.
(C) Tools.
(D) Machinery.
(E) Equipment.
(F) General work areas.
(3) Have actual volatile organic compound (VOC) emissions, before consideration of controls, of equal to or greater than three (3) tons per rolling twelve (12) month period from all solvent cleaning operations.

(b) Solvent cleaning operations exempt from the requirements of this rule based on the threshold applicability in subsection (a)(3) shall maintain records as required under section 10 of this rule.

(Air Pollution Control Board; 326 IAC 8-17-1)

326 IAC 8-17-2 Exemptions

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 2. (a) This rule does not apply to cleaning operations in the following source categories listed for regulation under Section 183(e) of the Clean Air Act:
(1) Aerospace coatings.
(2) Flexible packaging printing materials.
(3) Lithographic printing materials.
(4) Letterpress printing materials.
(5) Flat wood paneling coatings.
(6) Large appliance coatings.
(7) Metal furniture coatings.
(8) Paper, film, and foil coatings.
(9) Wood furniture coatings.
(10) Shipbuilding and repair coatings.
(11) Plastic parts coatings.
(12) Miscellaneous metal parts coatings.
(13) Miscellaneous industrial adhesives.
(14) Auto and light duty truck assembly coatings.

(b) The following solvent cleaning operations are exempt from all the requirements of this rule:
(1) Any solvent cleaning operation that is subject to 326 IAC 8-3 (Organic Solvent Degreasing Operations).
(2) Janitorial cleaning, including graffiti removal.
(3) Stripping of cured coatings, cured ink, or cured adhesives.
(4) Cleaning operations in printing prepress or graphic arts prepress areas, including the cleaning of film processors, color scanners, plate processors, film cleaning, and plate cleaning.
(5) Cleaning operations at digital printing presses.

(c) The following solvent cleaning operations are exempt from the VOC content limitations in section 4 of this rule:
(1) Cleaning of the following:
(A) Solar cells.

(B) Laser hardware.
(C) Scientific instruments.
(D) High-precision optics.
(2) Cleaning conducted as part of the following:
(A) Performance laboratory tests on coatings, adhesives, or inks.
(B) Research and development programs.
(C) Laboratory tests in quality assurance laboratories.
(3) Cleaning of paper-based gaskets and clutch assemblies where the rubber is bonded to metal by means of an adhesive.
(4) Cleaning of cotton swabs to remove cottonseed oil before cleaning of high precision optics.
(5) Medical device and pharmaceutical sources using up to one and one-half (1.5) gallons per day of solvents.
(6) Cleaning of adhesive application equipment used for thin metal laminating.
(7) Cleaning of electronic or electrical cables.
(8) Touch-up cleaning performed on printed circuit boards where surface mounted devices have already been attached.
(9) Cleaning of coating and adhesive application processes used to manufacture transdermal drug delivery product using less than three (3) gallons per day of ethyl acetate.
(10) Cleaning of application equipment used to apply coatings on satellites and radiation effect coatings.
(11) Cleaning of ultraviolet or electron beam adhesive application.
(12) Cleaning of sterilization indicating ink application equipment if the source employs less than one and one-half (1.5) gallons per day of solvents for the cleaning.
(13) Cleaning of the following:
(A) Metering rollers.
(B) Dampening rollers.
(C) Printing plates.
(14) Cleaning of polyester resin application equipment for sources subject to 40 CFR 63, Subpart WWWW*.

(d) The following solvent cleaning operations are exempt from the work practice standards in section 4(c) of this rule:
(1) Cleaning of the nozzle tips of automated spray equipment systems, except for robotic systems.
(2) Cleaning with spray bottles or containers described in section 4(b)(2) of this rule.
(3) Printing operations where the roller or blanket wash is applied automatically.

(e) Cleaning with aerosol products shall be exempt from the requirements of section 4(a) and 4(c) of this rule if the source employs one and one-quarter (1.25) gallons or less of the aerosol products per day.

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(Air Pollution Control Board; 326 IAC 8-17-2)

326 IAC 8-17-3 "Composite partial vapor pressure" defined

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 3. For purposes of this rule, "composite partial vapor pressure" means the sum of the partial pressures of the VOC compounds in a solvent.

(Air Pollution Control Board; 326 IAC 8-17-3)

326 IAC 8-17-4 VOC emissions control requirements

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11

Affected: IC 13-15; IC 13-17

Sec. 4. (a) The owner or operator of a source that is subject to this rule shall not use a solvent to perform solvent cleaning operations unless the solvent complies with the applicable VOC content limitation as follows:

Solvent Cleaning Operation	VOC Limit (as-applied) (pounds/gallon)
Product cleaning during manufacturing process or surface preparation for coating, adhesive, or ink application:	
General	0.42
Electrical apparatus components and electronic components	0.83
Medical devices and pharmaceuticals	6.7
Repair and maintenance cleaning:	
General	0.42
Electrical apparatus components and electronic components	0.83
Medical devices and pharmaceuticals:	
Tools, equipment, and machinery	6.7
General work surfaces	5.0
Cleaning of coating or adhesive application equipment	0.42
Cleaning of ink application equipment:	
General	0.42
Flexographic printing	0.42
Gravure printing:	
Publication	0.83
Packaging	0.42
Screen printing	4.2
Ultraviolet ink and electron beam ink application equipment, except screen printing	4.2
Specialty flexographic printing	0.83
Cleaning of polyester resin application equipment not subject to 40 CFR 63, Subpart WWWW*	0.42

(b) The owner or operator of a source that is subject to this rule shall employ only the following cleaning devices and methods:

(1) Wipe cleaning.

(2) Closed containers or hand-held spray bottles from which solvents are applied without a propellant-induced force.

(3) Cleaning equipment that has a solvent container that is closed during cleaning operations, except when depositing and removing objects to be cleaned, and is closed during nonoperation with the exception of maintenance and repair to the cleaning equipment itself.

(4) Remote reservoir cleaner that complies with all of the following:

(A) Prevents solvent vapors from escaping from the solvent container by using such devices as a cover or a valve when the remote reservoir is not being used, cleaned, or repaired.

(B) Directs solvent flow in a manner that will prevent liquid solvent from splashing outside of the remote reservoir cleaner.

(C) Does not clean porous or absorbent materials, such as:

(i) cloth;

(ii) leather;

(iii) wood; or

(iv) rope.

(D) Uses only solvent containers free of all liquid leaks. Auxiliary equipment, such as pumps, pipelines, or flanges, shall not have any liquid leaks, visible tears, or cracks. Any liquid leak, visible tear, or crack detected shall be repaired within one (1) calendar day, or the leaking section of the remote reservoir cold cleaner shall be drained of all solvent and shut down until it is replaced or repaired.

(5) Nonatomized solvent flow method where the cleaning solvent is collected in a container or a collection system that is closed except for solvent collection openings and, if necessary, openings to

avoid excessive pressure buildup inside the container.

(6) Solvent flushing where the cleaning solvent is discharged into a container that is closed except for solvent collection openings and, if necessary, openings to avoid excessive pressure buildup inside the container. The discharged solvent from the equipment must be collected into containers without atomizing into the open air. The solvent may be flushed through the system by air or hydraulic pressure or by pumping.

(c) The owner or operator of a source that is subject to this rule is prohibited from atomizing any solvent unless the emissions are vented to VOC emission control equipment that meets the requirements of subsection (e).

(d) Work practices shall be used to minimize VOC emissions from the use, handling, storage, and disposal of cleaning solvents and shop towels. Work practices shall include, at a minimum, but not be limited to, the following:

(1) Covering open containers and used applicators.

(2) Minimizing air circulation around cleaning operations.

(3) Properly disposing of used solvent and shop towels.

(4) Implementing equipment practices that minimize emissions, for example, keeping parts cleaners covered and maintaining cleaning equipment to repair solvent leaks.

(e) As an alternative to complying with the requirements in subsections (a) and (b), the owner or operator of a source that is subject to this rule may comply with this rule by installing and operating VOC emission control equipment for the solvent cleaning operation. The VOC emission control equipment shall comply with the following requirements:

(1) A capture efficiency of at least ninety percent (90%), by weight, for the VOC emissions.

(2) Either a destruction efficiency of at least ninety percent (90%), by weight, or an outlet concentration of less than fifty (50) parts per million, by volume, dry basis, for the VOC emissions.

(f) As an alternative to complying with the VOC content limits in subsection (a), the owner or operator of a source may use solvents or solvent solutions for industrial cleaning operations that have a VOC composite partial vapor pressure at or below eight (8) mmHg at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).

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(Air Pollution Control Board; 326 IAC 8-17-4)

326 IAC 8-17-5 Compliance dates

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 5. The owner or operator of a source that is subject to this rule shall comply with the requirements of this rule no later than April 1, 2011, or upon initial startup of the operation for new solvent cleaning operations.

(Air Pollution Control Board; 326 IAC 8-17-5)

326 IAC 8-17-6 Compliance test methods

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 6. (a) Compliance with add-on control requirements shall be determined by performing emission tests as follows:

(1) Run at typical operating conditions and flow rates compatible with scheduled production during any emission testing.

(2) The initial emission test shall be performed, within ninety (90) days after the compliance date for the solvent cleaning operation or startup, when the control device is installed and operating to demonstrate compliance with the applicable emission control requirement.

(3) The test methods and procedures in 326 IAC 8-1-4(d) through 326 IAC 8-1-4(f) shall be followed.

(b) VOC content of solvents shall be determined in accordance with the following:

(1) Analysis by 40 CFR 60, Method 24*.

(2) Analytical data derived from a material safety data sheet (MSDS) or equivalent information from the supplier as long as it is based on 40 CFR 60, Method 24*.

(3) If diluted prior to use, a material balance calculation that combines 40 CFR 60, Method 24* analytical data or supplier information for the concentrated materials used to prepare the cleaning solvent and the proportions in which they are mixed to make the as-applied material.

(c) The composite partial vapor pressure of solvents shall be determined as follows:

(1) Determine the identity and quantity of each compound in a blended organic solvent using the manufacturer's product formulation data.

(2) Determine the vapor pressure of each pure VOC component by using one (1) of the following:

(A) Standard reference texts.

(B) ASTM Method D2879-92*.

(3) Calculate the composite partial vapor pressure of the cleaning material by using the following formula:

$$PP_c = \sum_{i=1}^{n} \frac{(W_i)(VP_i)/MW_i}{\frac{W_w}{MW_w} + \frac{W_c}{MW_c} + \sum_{i=1}^{n} \frac{W_i}{MW_i}}$$

Where:

W_i	=	Weight of the "i"th VOC compound, in grams
W_w	=	Weight of water, in grams
W_c	=	Weight of exempt compound, in grams
MW_i	=	Molecular weight of the "i"th VOC compound, in g/g-mole
MW_w	=	Molecular weight of water, in g/g-mole
MW_c	=	Molecular weight of exempt compound, in g/g-mole
PP_c	=	VOC composite partial vapor pressure at 20°C (68°F), in mmHg
VP_i	=	Vapor pressure of the "i"th VOC compound at 20°C (68°F), in mmHg

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(Air Pollution Control Board; 326 IAC 8-17-6)

326 IAC 8-17-7 Monitoring and record keeping

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 7. (a) The owner or operator of a solvent cleaning operation that is subject to one (1) or more of the VOC content limits in section 4 of this rule shall collect and record the following information each month for each cleaning material subject to a VOC content limit:

(1) The name and identification of each cleaning material and the associated solvent cleaning activity.

(2) The VOC content of each cleaning material, in pounds per gallon, as applied or the VOC composite partial vapor pressures of the solvents or solvent solutions used in the industrial cleaning operation.

(b) The owner or operator of a solvent cleaning operation installing and operating VOC emission control equipment to achieve and maintain compliance with the requirements in section 4(e) of this rule shall comply with the following:

(1) Monitoring equipment requirements in 326 IAC 8-1-12(b)(2).

(2) The control device monitoring data in 326 IAC 8-1-12(c)(6) through 326 IAC 8-1-12(c)(8) shall be collected and recorded each day of operation of the solvent cleaning operation and control device.

(c) Any owner or operator of a solvent cleaning operation that is exempt from the VOC content limits specified in section 4 of this rule, under section 2(c)(5) or 2(c)(12) of this rule, shall collect and record the following information each day for each such solvent cleaning operation:

(1) The name and identification of each solvent used in the solvent cleaning activity.

(2) The volume, in gallons, of each solvent used in the industrial cleaning operation.

(3) The total volume, in gallons, of all the solvents used in the industrial cleaning operation.

(d) Any owner or operator of a solvent cleaning operation that is exempt from the requirements in section 4(a) and 4(c) of this rule, under section 2(e) of this rule, shall collect and record the following information each day for each such solvent cleaning operation:

(1) The name and identification of each aerosol product used in the solvent cleaning activity.

(2) The volume, in gallons, of each aerosol product used in the industrial cleaning operation.

(3) The total volume, in gallons, of all the aerosol product used in the industrial cleaning operation.

(e) Any owner or operator of a solvent cleaning operation that is exempt from the VOC content limits specified in section 4 of this rule, under section 2(c)(9) of this rule, shall record each day the total volume of ethyl acetate employed in such solvent cleaning operation.

(f) All records required by this rule shall be maintained at the source for a period of five (5) years.

(Air Pollution Control Board; 326 IAC 8-17-7)

326 IAC 8-17-8 Reporting requirements for monitoring and record keeping information

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 8. (a) The owner or operator of a solvent cleaning operation shall notify the department of the following exceedances of applicable requirements in section 4 of this rule within forty-five (45) days after the instance occurs:

(1) Each record showing the use of noncomplying solvents.

(2) Each record showing that the solvent cleaning operation exceeded an applicable maximum daily solvent usage limit specified in section 2(c)(5), 2(c)(9), 2(c)(12), or 2(e) of this rule.

(b) The owner or operator of a solvent cleaning operation that employs control equipment to comply with this rule shall submit to the department quarterly summaries of the records required by section 7(b) of this rule. These quarterly reports shall:

(1) be submitted no later than April 30, July 31, October 31, and January 31; and

(2) cover records for the previous calendar quarter.

(Air Pollution Control Board; 326 IAC 8-17-8)

326 IAC 8-17-9 Requirements on compliance certification

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 9. (a) The owner or operator of an affected solvent cleaning operation shall submit to the department a compliance certification within thirty (30) days following the completion of any of the following requirements:

(1) The first documented achievement of compliance with each of the requirements in section 4 of this rule, as applicable.

(2) The installation and initial use of a VOC emission controls system for the solvent cleaning operation.

(3) The installation and initial use of any monitoring device.

(4) A compliance test to demonstrate compliance with the applicable control requirement.

(b) The compliance certification under subsection (a) shall provide the following information, where applicable:

(1) A description of the requirements.

(2) A description of the VOC emission control system.

(3) A description of the monitoring devices.

(4) A description of the records that document continuing compliance.

(5) The results on any compliance tests, including documentation of test data.

(6) The results of any records that document continuing compliance, including calculations.

(7) A statement by the owner or operator of the affected source as to whether the solvent cleaning operation has complied with applicable requirements.

(Air Pollution Control Board; 326 IAC 8-17-9)

326 IAC 8-17-10 Record keeping requirements for exempt sources

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 10. (a) An owner or operator employing a solvent cleaning operations that is exempt from the requirements of this rule, other than the record keeping requirements of this section, based on the threshold applicability in section 1(a)(3) of this rule shall maintain the following records on a monthly basis:

(1) The total gallons of each cleaning solvent used.

(2) The VOC content of each cleaning solvent.

(b) Records required by subsection (a) shall be submitted to the department within thirty (30) days of the receipt of a written request. If the records are not available, the source shall be considered to be subject to the requirements in section 4 of this rule.

(Air Pollution Control Board; 326 IAC 8-17-10)

SECTION 3. 326 IAC 8-22 IS ADDED TO READ AS FOLLOWS:

Rule 22. Miscellaneous Industrial Adhesives

326 IAC 8-22-1 Applicability

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 1. (a) This rule applies to each miscellaneous industrial adhesive application process at sources

that meet the following criteria:

(1) Are located in Lake County or Porter County.

(2) Have actual volatile organic compound (VOC) emissions, before consideration of controls, equal to or greater than three (3) tons per rolling twelve (12) month period from all miscellaneous industrial adhesive application processes and related cleaning activities.

(b) An application process consists of a series of one (1) or more adhesive applicators and any associated drying area or oven, or both, wherein an adhesive is applied, dried or cured, or both. An application process ends at the point where the adhesive is dried or cured, or prior to any subsequent application of a different adhesive. It is not necessary for an application process to have an oven or flash-off area.

(c) Industrial adhesive application operations exempt from the requirements of this rule based on the threshold applicability in subsection (a)(2) shall maintain records as required under section 8 of this rule.

(Air Pollution Control Board; 326 IAC 8-22-1)

326 IAC 8-22-2 Definitions

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 2. The following definitions apply throughout this rule:

(1) "Acrylonitrile-butadiene-styrene welding" or "ABS welding" means any process to weld acrylonitrile-butadiene-styrene pipe.

(2) "Adhesive" means any chemical substance that is applied for the purpose of bonding two (2) surfaces together other than by mechanical means.

(3) "Adhesive primer" means any product intended by the manufacturer for application to a substrate, prior to the application of an adhesive, to provide a bonding surface.

(4) "Aerosol adhesive or adhesive primer" means an adhesive or adhesive primer packaged as an aerosol product in which the spray mechanism is permanently housed in a nonrefillable can designed for hand-held application without the need for ancillary hoses or spray equipment.

(5) "Ceramic tile installation adhesive" means any adhesive intended by the manufacturer for use in the installation of ceramic tiles.

(6) "Contact bond adhesive" means an adhesive that:

(A) is designed for application to both surfaces that are to be bonded together;

(B) is allowed to dry before the two (2) surfaces are placed in contact with each other;

(C) forms an immediate bond that is impossible, or difficult, to reposition after both adhesive-coated surfaces are placed in contact with each other; and

(D) does not need sustained pressure or clamping of surfaces after the adhesive-coated surfaces have been brought together using sufficient momentary pressure to establish full contact between both surfaces.

The term does not include rubber cements that are primarily intended for use on paper substrates or vulcanizing fluids that are designed and labeled for tire repair only.

(7) "Cove base" means a flooring trim unit, generally made of vinyl or rubber, having a concave radius on one (1) edge and a convex radius on the opposite edge that is used:

(A) in forming a junction between the bottom wall course and the floor; or

(B) to form an inside corner.

(8) "Cove base installation adhesive" means any adhesive intended by the manufacturer to be used for the installation of cove base or wall base on a wall or vertical surface at floor level.

(9) "Cyanoacrylate adhesive" means any adhesive with a cyanoacrylate content of at least ninety-five percent (95%) by weight.

(10) "Ethylene propylene diene monomer roof membrane" or "EPDM roof membrane" means a prefabricated single sheet of elastomeric material that is:

(A) composed of ethylene propylene diene monomer (EPDM); and

(B) field applied to a building roof using one (1) layer of membrane material.

(11) "Flexible vinyl" means nonrigid polyvinyl chloride plastic with a least five percent (5%) by weight plasticizer content.

(12) "Indoor floor covering installation adhesive" means the following:
(A) Any adhesive intended by the manufacturer for use in the installation of the following:
(i) Wood flooring.
(ii) Carpet.
(iii) Resilient tile.
(iv) Vinyl tile.
(v) Vinyl backed carpet.
(vi) Resilient sheet and roll or artificial grass.
(B) Excluded from this definition are adhesives used to install:
(i) ceramic tile; and
(ii) perimeter bonded sheet flooring with vinyl backing onto a nonporous substrate, such as flexible vinyl.
(13) "Laminate" means a product made by bonding together two (2) or more layers of material.
(14) "Metal to urethane or rubber molding or casting adhesive" means any adhesive intended by the manufacturer to bond metal to:
(A) high density or elastomeric urethane; or
(B) molded rubber materials;
in heater molding or casting processes, to fabricate products such as rollers for computer printers or other paper handling equipment.
(15) "Motor vehicle adhesive" means an adhesive, including glass bonding adhesive, used at a source that is not an automobile or light duty truck assembly coating source, applied for the purpose of bonding two (2) vehicle surfaces together without regard to the substrates involved.
(16) "Motor vehicle glass bonding primer" means a primer, used at a source that is not an automobile or light duty truck assembly coating source, that:
(A) is applied to:
(i) windshields;
(ii) other glass; or
(iii) body openings;
to prepare the glass or body opening for the application of glass bonding adhesives or the installation of adhesive bonded glass; and
(B) includes:
(i) glass bonding; and
(ii) cleaning primers;
that perform both functions (cleaning and priming of the windshield or other glass, or body openings) prior to the application of adhesive or the installation of adhesive bonded glass.
(17) "Motor vehicle weather-strip adhesive" means an adhesive, used at a source that is not an automobile or light duty truck assembly coating source, applied to weather-stripping materials for the purpose of bonding the weather-strip material to the surface of the vehicle.
(18) "Multipurpose construction adhesive" means any adhesive intended by the manufacturer for use in the installation or repair of various construction materials, including, but not limited to, the following:
(A) Drywall.
(B) Subfloor.
(C) Panel.
(D) Fiberglass reinforced plastic (FRP).
(E) Ceiling tile.
(F) Acoustical tile.
(19) "Outdoor floor covering installation adhesive" means any adhesive intended by the manufacturer for use in the installation of floor covering that is not in an enclosure and that is exposed to ambient weather conditions during normal use.
(20) "Panel installation" means the installation of any:
(A) plywood;
(B) predecorated hardboard (or tileboard);
(C) FRP; and
(D) similar predecorated or nondecorated panels;
to studs or solid surfaces using an adhesive formulated for that purpose.
(21) "Perimeter bonded sheet flooring installation" means the installation of sheet flooring with vinyl backing onto a nonporous substrate using an adhesive designed to be applied only to a strip of up to four (4) inches wide around the perimeter of the sheet flooring.
(22) "Plastics" means synthetic materials chemically formed by the polymerization of organic (carbon-based) substances. Plastics are described as follows:

(A) Usually compounded with one (1) or more of the following:
(i) Modifiers.
(ii) Extenders.
(iii) Reinforcers.
(B) Capable of being:
(i) molded;
(ii) extruded;
(iii) cast into various shapes and films; or
(iv) drawn into filaments.

(23) "Plastic solvent welding adhesive" means any adhesive intended by the manufacturer for use to dissolve the surface of plastic to form a bond between mating surfaces.

(24) "Plastic solvent welding adhesive primer" means any primer intended by the manufacturer for use to prepare plastic substrates prior to bonding or welding.

(25) "Porous material" means a substance that has tiny openings, often microscopic, in which fluids may be absorbed or discharged, including, but not limited to, paper and corrugated paperboard. For purposes of this rule, the term does not include wood.

(26) "Reinforced plastic composite" means a composite material consisting of plastic reinforced with fibers.

(27) "Rubber" means any natural or manmade rubber substrate, including, but not limited to, the following:
(A) Styrene-butadiene rubber.
(B) Polychloroprene (neoprene).
(C) Butyl rubber.
(D) Nitrile rubber.
(E) Chlorosulfonated polyethylene.
(F) Ethylene propylene diene terpolymer.

(28) "Sheet rubber lining installation" means the process of applying sheet rubber liners by hand to metal or plastic substrates to protect the underlying substrate from corrosion or abrasion. These operations also include laminating sheet rubber to fabric by hand.

(29) "Single-ply roof membrane" means a prefabricated single sheet of rubber, normally ethylene propylene diene terpolymer, that is field applied to a building roof using one (1) layer of membrane material. For purposes of this rule, the term does not include membranes prefabricated from EPDM.

(30) "Single-ply roof membrane adhesive primer" means any primer labeled for use to clean and promote adhesion of the single-ply roof membrane seams or splices prior to bonding.

(31) "Single-ply roof membrane installation and repair adhesive" means any adhesive labeled for use in the installation or repair of single-ply roof membrane, where the following apply:
(A) Installation includes, at a minimum, the following:
(i) Attaching the edge of the membrane to the edge of the roof.
(ii) Applying flashings to vents, pipes, and ducts that protrude through the membrane.
(B) Repair includes the following:
(i) Gluing the edges of torn membrane together.
(ii) Attaching a patch over a hole.
(iii) Reapplying flashings to vents, pipes, or ducts installed through the membrane.

(32) "Structural glazing adhesive" means any adhesive intended by the manufacturer to apply any of the following to exterior building frames:
(A) Glass.
(B) Ceramic.
(C) Metal.
(D) Stone.
(E) Composite panels.

(33) "Subfloor installation" means the installation of subflooring material over floor joists, including the construction of any load bearing joists. Subflooring is covered by a finish surface material.

(34) "Thin metal laminating adhesive" means any adhesive intended by the manufacturer for use in bonding multiple layers of:
(A) metal to metal; or
(B) metal to plastic;
in the production of electronic or magnetic components in which the thickness of the bond line or lines is less than twenty-five hundredths (0.25) mils.

(35) "Tire repair" means a process that includes:
(A) expanding a:
(i) hole;

(ii) tear;
(iii) fissure; or
(iv) blemish;
in a tire casing; and
(B) completing the process by:
(i) grinding or gouging;
(ii) applying adhesive; and
(iii) filling;
the hole or crevice with rubber.

(36) "Waterproof resorcinol glue" means a two (2) part resorcinol-resin-based adhesive designed for applications where the bond line must be resistant to conditions of continuous immersion in fresh water or salt water.

(Air Pollution Control Board; 326 IAC 8-22-2)

326 IAC 8-22-3 VOC content limits

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 3. (a) Except as provided in subsection (c) and section 4 of this rule, on and after April 1, 2011, an owner or operator applying miscellaneous industrial adhesives or adhesive primers within Lake County or Porter County shall comply with applicable VOC content limits specified in subsection (f).

(b) The VOC content limits in subsection (f) for adhesives or adhesive primers applied to particular substrates shall apply as follows:
(1) If an operator uses an adhesive that is subject to a specific VOC content limit in subsection (f), the specific limit is applicable rather than an adhesive-to-substrate limit.
(2) The applicable substrate category with the highest VOC content shall be the limit when an adhesive is used to bond dissimilar substrates together.

(c) A person using an adhesive or adhesive primer subject to this rule may comply with subsection (a) by using add-on air pollution control equipment if the equipment meets the following requirements:
(1) The VOC emissions from the use of all adhesives or adhesive primers subject to this rule are reduced by an overall capture and control efficiency of at least eighty-five percent (85%) by weight.
(2) The combustion temperature is monitored continuously if a thermal incinerator is operated.
(3) Inlet and exhaust gas temperatures are monitored continuously if a catalytic incinerator is operated.
(4) Control device efficiency is monitored continuously if a carbon absorber or control device other than a thermal or catalytic incinerator is operated.
(5) Operation records sufficient to demonstrate compliance with the requirements of this subsection are maintained as required by section 6 of this rule.

(d) Work practices shall be used to minimize VOC emissions from mixing operations, storage tanks, and other containers, and handling operations for adhesives, adhesive primers, cleaning materials, and waste materials. Work practices shall include, at a minimum, the following:
(1) Store all VOC adhesives, adhesive primers, and cleaning materials in closed containers or pipes.
(2) Minimize spills of VOC adhesives, adhesive primers, and clean up any spill immediately.
(3) Convey any adhesives, adhesive primers, and cleaning materials in closed containers or pipes.
(4) Keep mixing vessels that contain VOC adhesives, adhesive primers, or other materials closed except when specifically in use.
(5) Clean equipment without atomizing the cleaning solvent and ensure all spent solvent is captured in a closed container.

(e) In addition to the VOC content limits in subsection (f), one (1) or a combination of the following equipment shall be used for adhesive or adhesive primer application:
(1) Electrostatic equipment.
(2) High volume low-pressure (HVLP) spray equipment.

(3) Flow coating.
(4) Roller coating or hand application, including nonspray application methods similar to hand or mechanically powered caulking gun, brush, or direct hand application.
(5) Dip coating, including electrodeposition.
(6) Airless spray.
(7) Air-assisted airless spray.
(8) Other coating application method capable of achieving a transfer efficiency equivalent to or better than that achieved by HVLP spraying.

(f) The VOC content limits for adhesives and adhesive primers are as follows:

Category**	VOC Content Limit	
Specialty Adhesive Application Processes	**grams/liter**	**lb/gal**
Ceramic tile installation	**130**	**1.1**
Contact adhesive	**250**	**2.1**
Cove base installation	**150**	**1.3**
Indoor floor covering installation	**150**	**1.3**
Metal to urethane or rubber molding or casting	**850**	**7.1**
Motor vehicle adhesive	**250**	**2.1**
Motor vehicle weather-strip adhesive	**750**	**6.3**
Multipurpose construction	**200**	**1.7**
Outdoor floor covering installation	**250**	**2.1**
Single-ply roof membrane installation or repair (except EPDM)	**250**	**2.1**
Structural glazing	**100**	**0.8**
Thin metal laminating	**780**	**6.5**
Tire repair	**100**	**0.8**
Perimeter bonded sheet vinyl flooring installation	**660**	**5.5**
Plastic solvent welding (ABS)	**400**	**3.3**
Plastic solvent welding (except ABS)	**500**	**4.2**
Sheet rubber lining installation	**850**	**7.1**
Waterproof resorcinol glue	**170**	**1.4**
Adhesive Primer Application Processes		
Motor vehicle glass bonding primer	**900**	**7.5**
Plastic solvent welding adhesive primer	**650**	**5.4**
Single-ply roof membrane adhesive primer	**250**	**2.1**
Other adhesive primer	**250**	**2.1**
Adhesives Applied to the Listed Substrate		
Flexible vinyl	**250**	**2.1**
Reinforced plastic composite (fiberglass)	**200**	**1.7**
Metal	**30**	**0.3**
Porous material (except wood)	**120**	**1.0**
Rubber	**250**	**2.1**
Other substrates	**250**	**2.1**
Wood	**30**	**0.3**

**** The VOC content is determined as the weight of VOC, less water and exempt compounds.**

(Air Pollution Control Board; 326 IAC 8-22-3)

326 IAC 8-22-4 Exemptions and exceptions

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 4. (a) The requirements of this rule shall not apply to the following:
(1) The use of the following compounds:

(A) Adhesives or adhesive primers being tested or evaluated in any:
(i) research and development;
(ii) quality assurance; or
(iii) analytical;
laboratory, provided records are maintained as required in section 6 of this rule.
(B) Cyanoacrylate adhesives.
(C) Adhesives or adhesive primers that are sold or supplied by the manufacturer or supplier in containers with a net:
(i) volume of sixteen (16) fluid ounces or less; or
(ii) weight of one (1) pound or less;
except plastic solvent welding adhesives and contact adhesives.
(D) Contact adhesives that are sold or supplied by the manufacturer or supplier in containers with a net volume of one (1) gallon or less.
(E) Aerosol adhesives and aerosol adhesive primers.

(2) The use of adhesives or adhesive primers in the following operations:
(A) Tire repair operations, provided the label of the adhesive states "For tire repair only".
(B) In the assembly, repair, and manufacture of aerospace or undersea-based weapon systems.
(C) The manufacture of medical equipment.
(D) Plaque laminating operations in which adhesives are used to bond clear, polyester acetate laminate to wood with lamination equipment installed prior to July 1, 1992. Any person claiming an exemption under this subdivision shall record and maintain monthly operational records sufficient to demonstrate compliance with this exemption and in accordance with section 6 of this rule.
(E) Processes using polyester bonding putties to assemble fiberglass parts at:
(i) fiberglass boat manufacturing sources; and
(ii) other reinforced plastic composite manufacturing sources.

(b) Section 3 of this rule shall not apply to the use of any adhesives or adhesive primers provided the total volume of adhesives and adhesive primers applied source wide does not exceed fifty-five (55) gallons per calendar year. Any person claiming an exemption under this subdivision shall record and maintain monthly operational records sufficient to demonstrate compliance with this exemption and in accordance with section 6 of this rule.

(Air Pollution Control Board; 326 IAC 8-22-4)

326 IAC 8-22-5 Compliance dates

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 5. The owner or operator of a source that is subject to this rule shall comply with the requirements of this rule no later than April 1, 2011, or upon initial start-up of the operation for new miscellaneous industrial adhesive operations.

(Air Pollution Control Board; 326 IAC 8-22-5)

326 IAC 8-22-6 Record keeping

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 6. (a) Each person subject to this rule, including the exemption in section 4(b) of this rule, shall maintain records demonstrating compliance with this rule, including, but not limited to, the following information:

(1) A list of each adhesive or adhesive primer in use and in storage.
(2) A data sheet or material list that provides the following:
(A) Material name.
(B) Manufacturer identification.
(C) Material application.

(3) The use and mix ratio of the following:
(A) Catalysts.
(B) Reducers.
(C) Other components.
(4) The VOC content of each product, as supplied.
(5) The final VOC content or vapor pressure, as applied.
(6) The monthly volume of each adhesive or adhesive primer used.

(b) Any person who complies with section 3(a) of this rule through the use of add-on air pollution control equipment shall record the key operating parameters for the control equipment, including, but not limited to, the following information:
(1) The volume used per day of each adhesive or adhesive primer that:
(A) is subject to a VOC content limit in section 3(f) of this rule; and
(B) exceeds a limit listed in section 3(f) of this rule.
(2) On a daily basis, the:
(A) combustion temperature;
(B) inlet and exhaust gas temperatures; and
(C) control device efficiency, as appropriate;
under section 3(c) of this rule.
(3) Daily hours of operation.
(4) All maintenance performed, including the following:
(A) Date of maintenance.
(B) Type of maintenance.

(c) All records documenting compliance with this rule shall be:
(1) maintained for five (5) years from the date a record is created; and
(2) made available to the department within ninety (90) days of a request.

(d) For adhesives or adhesive primers subject to the laboratory testing exemption under section 4(a)(1)(A) of this rule, the person conducting the testing shall make and maintain records of all adhesive or adhesive primer materials used, including, but not limited to, the following:
(1) Product name.
(2) Product category of the material or type of application.
(3) VOC content of each material.
(4) The dates when the exempt adhesives or adhesive primers were used.

(Air Pollution Control Board; 326 IAC 8-22-6)

326 IAC 8-22-7 Compliance procedures and test methods

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 7. (a) Except as provided in subsections (c) and (d), the VOC and solids content of adhesives or adhesive primers shall be determined in accordance with the following:
(1) 40 CFR 60, Appendix A, Method 24*.
(2) Analytical data derived from a material safety data sheet (MSDS) or equivalent information from the supplier as long as it is based on 40 CFR 60, Appendix A, Method 24*.

(b) The organic content of exempt organic compounds shall be determined using ASTM D4457-85*, as applicable.

(c) The VOC content for reactive adhesives shall be determined using the procedures for reactive adhesives in 40 CFR 63, Subpart PPPP, Appendix A*.

(d) If air pollution control equipment is used to meet the requirements of this rule, the owner or operator shall make the following determinations:

(1) The measurement of capture efficiency shall be conducted and reported in accordance with 326 IAC 8-1-4(c).
(2) The control efficiency shall be determined in accordance with 326 IAC 8-1-4(d) through 326 IAC 8-1-4(f).

(e) Grams of VOC per liter of adhesive, less water and exempt compounds, shall be calculated according to the following equation:

$$\text{Grams of VOC per liter of adhesive} = \frac{Ws - Ww - We}{Vm - Vw - Ve}$$

Where:
Ws = weight of volatile compounds, in grams
Ww = weight of water, in grams
We = weight of exempt compounds, in grams
Vm = volume of material, in liters
Vw = volume of water, in liters
Ve = volume of exempt compounds, in liters

(f) Grams of VOC per liter of material shall be calculated according to the following equation:

$$\text{Grams of VOC per liter of materials} = \frac{Ws - Ww - We}{Vm}$$

Where:
Ws = weight of volatile compounds, in grams
Ww = weight of water, in grams
We = weight of exempt compounds, in grams
Vm = volume of material, in liters

(g) Percent VOC by weight shall be calculated according to the following equation:

$$\%\ \text{VOC by weight} = (Wv / W) \times 100$$

Where:
Wv = weight of VOCs in grams
W = weight of material in grams

***These documents are incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Legal Counsel, Indiana Government Center North, Thirteenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204.**

(Air Pollution Control Board; 326 IAC 8-22-7)

326 IAC 8-22-8 Record keeping requirements for exempt sources

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 8. (a) An owner or operator applying industrial adhesives that is exempt from the requirements of this rule based on the threshold applicability in section 1(a)(2) of this rule shall maintain the following records on a monthly basis:
(1) The total gallons of each adhesive.
(2) The VOC content of each adhesive.

(b) Records required by subsection (a) shall be submitted to the department within thirty (30) days of the receipt of a written request. If the records are not available, the source shall be considered to be subject to the requirements in section 3 of this rule.

(Air Pollution Control Board; 326 IAC 8-22-8)

Notice of Public Hearing

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